
California Board of Registered Nursing

2009-2010 Annual School Report

Data Summary and Historical Trend Analysis

A Presentation of Pre-Licensure Nursing Education Programs in California

Northern Sacramento Valley

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INTRODUCTION

Each year, the California Board of Registered Nursing (BRN) requires all pre-licensure registered nursing programs in California to complete a survey detailing statistics of their programs, students and faculty. The survey collects data from August 1 through July 31. Information gathered from these surveys is compiled into a database and used to analyze trends in nursing education.

The BRN commissioned the University of California, San Francisco (UCSF) to conduct a historical analysis of data collected from the 2000-2001 survey through the 2009-2010 survey. In this report, we present ten years of historical data from the BRN Annual School Survey. Data analyses were conducted statewide and for nine economic regions¹ in California, with a separate report for each region. All reports are available on the BRN website (<http://www.rn.ca.gov/>).

This report presents data from the 5-county Northern Sacramento Valley region. Counties in the region include Butte, Colusa, Glenn, Shasta, and Tehama. All data are presented in aggregate form and describe overall trends in the areas and over the times specified and, therefore, may not be applicable to individual nursing education programs. Additional data from the past ten years of the BRN Annual School Survey are available in an interactive database on the BRN website.

Data collected for the first time from the 2009-2010 survey are identified by the symbol (§). The reliability of these new data will be reviewed and considered for continued inclusion in future surveys.

¹ The nine regions include: (1) Northern California, (2) Northern Sacramento Valley, (3) Greater Sacramento, (4) Bay Area, (5) San Joaquin Valley, (7) Central Coast, (8) Southern California I (Los Angeles and Ventura counties), (9) Southern California II (Orange, Riverside, and San Bernardino counties), and (10) Southern Border Region. Counties within each region are detailed in the corresponding regional report. The Central Sierra (Region 6) does not have any nursing education programs and was, therefore, not included in the analyses.

DATA SUMMARY AND HISTORICAL TREND ANALYSES

This analysis presents pre-licensure program data from the 2009-2010 BRN Annual School Survey in comparison with data from previous years of the survey. Data items addressed include the number of nursing programs, enrollments, completions, retention rates, student and faculty census data, the use of clinical simulation by nursing programs, and clinical space and practice restrictions.

Trends in Pre-Licensure Nursing Programs

Number of Nursing Programs

There are three nursing programs in the Northern Sacramento Valley region that lead to RN licensure. Of these programs, two are ADN programs and one is a BSN program. All programs in this region are public.

Number of Nursing Programs

	<i>Academic Year</i>									
	<i>2000-2001</i>	<i>2001-2002</i>	<i>2002-2003</i>	<i>2003-2004</i>	<i>2004-2005</i>	<i>2005-2006</i>	<i>2006-2007</i>	<i>2007-2008</i>	<i>2008-2009</i>	<i>2009-2010</i>
Total # Nursing Programs	3	3	3	3	3	3	3	3	3	3
ADN Programs	2	2	2	2	2	2	2	2	2	2
BSN Programs	1	1	1	1	1	1	1	1	1	1
ELM Programs	-	-	-	-	-	-	-	-	-	-
Public Programs	3	3	3	3	3	3	3	3	3	3
Private Programs	0	0	0	0	0	0	0	0	0	0

Admission Spaces and New Student Enrollments

Admission spaces available for new student enrollments have increased substantially over the past decade, but have fluctuated since the 2004-2005 academic year. In 2009-2010 available space declined slightly over the previous year, whereas new student enrollments declined more dramatically. In 2009-2010, there were 226 admission spaces filled by 223 new enrollments, marking the first year since 2004-2005 that programs in the region did not overenroll new students.

Availability and Utilization of Admission Spaces

	<i>Academic Year</i>									
	<i>2000-2001</i>	<i>2001-2002</i>	<i>2002-2003</i>	<i>2003-2004</i>	<i>2004-2005</i>	<i>2005-2006</i>	<i>2006-2007</i>	<i>2007-2008</i>	<i>2008-2009</i>	<i>2009-2010</i>
Spaces Available	144	140	151	156	220	228	206	220	241	226
New Student Enrollments	144	140	149	156	220	293	239	237	272	223
% Spaces Filled	100.0%	100.0%	98.7%	100.0%	100.0%	128.5%	116.0%	107.7%	112.9%	98.7%

Northern Sacramento Valley region nursing programs continue to receive more applications requesting entrance into their programs than can be accommodated. Although there was a small drop in the number of qualified applications in 2009-2010 compared to the previous year (n=19), the decline in available space and new enrollments resulted in 78.4% (n=811) of qualified applications not being accepted. This is the highest proportion in the past ten years.

Applications Accepted and Not Accepted for Admission*

	<i>Academic Year</i>									
	<i>2000-2001</i>	<i>2001-2002</i>	<i>2002-2003</i>	<i>2003-2004</i>	<i>2004-2005</i>	<i>2005-2006</i>	<i>2006-2007</i>	<i>2007-2008</i>	<i>2008-2009</i>	<i>2009-2010</i>
Qualified Applications	268	124	257	266	523	697	705	611	1,053	1,034
<i>Accepted</i>	144	140	149	156	220	293	239	237	272	223
<i>Not Accepted</i>	124	-16	108	110	303	404	466	374	781	811
% Qualified Applications Not Accepted	46.3%	*NA	42.0%	41.4%	57.9%	58.0%	66.1%	61.2%	74.2%	78.4%

*Since these data represent applications rather than individuals, an increase in qualified applications may not represent equal growth in the number of individuals applying to nursing school.

New student enrollments increased steadily from 2000-2001 through 2005-2006, but have fluctuated since. In 2009-2010, new enrollments declined overall by 18% (n=49) compared with the previous year. The decline was due to a sharp drop in BSN enrollments, which fell 40%. In 2009-2010, approximately three-quarters of new students at pre-licensure nursing programs in the Northern Sacramento Valley region enrolled in a public ADN program.

New Student Enrollment by Program Type

	<i>Academic Year</i>									
	<i>2000-2001</i>	<i>2001-2002</i>	<i>2002-2003</i>	<i>2003-2004</i>	<i>2004-2005</i>	<i>2005-2006</i>	<i>2006-2007</i>	<i>2007-2008</i>	<i>2008-2009</i>	<i>2009-2010</i>
New Student Enrollment	144	140	149	156	220	293	239	237	272	223
ADN	64	80	88	96	120	174	158	146	175	165
BSN	80	60	61	60	100	119	81	91	97	58
ELM	-	-	-	-	-	-	-	-	-	-
Private	-	-	-	-	-	-	-	-	-	-
Public	144	140	149	156	220	293	239	237	272	223

Student Completions

As with available space and new enrollments, the number of students who completed a nursing program in the Northern Sacramento Valley region has stabilized over the past several years. In 2009-2010, total completions increased only slightly compared with the previous year. Of the 225 student completions in the region, 65.3% (n=147) completed an ADN program and 34.7% (n=78) completed a BSN program. .

Student Completions

	Academic Year									
	2000-2001	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010
Student Completions	136	114	144	138	157	164	224	203	217	225
ADN	81	60	75	77	88	109	149	126	139	147
BSN	55	54	69	61	69	55	75	77	78	78
ELM	-	-	-	-	-	-	-	-	-	-

Retention Rate

Of the 231 students scheduled to complete a nursing program in the 2009-2010 academic year, 87.9% (n=203) completed the program on-time, 2.2% (n=5) are still enrolled in the program, and 9.9% (n=23) dropped out or were disqualified from the program.

Student Cohort Completion and Retention Data

	Academic Year									
	2000-2001	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010
Students Scheduled to Complete the Program	124	139	185	158	188	160	211	216	185	231
Completed On Time	110	115	152	138	154	143	194	180	166	203
Still Enrolled	1	6	8	3	4	3	8	4	1	5
Attrition	13	18	25	17	30	14	9	32	18	23
Completed Late [‡]										4
Retention Rate*	88.7%	82.7%	82.2%	87.3%	81.9%	89.4%	91.9%	83.3%	89.7%	87.9%
Attrition Rate	10.5%	12.9%	13.5%	10.8%	16.0%	8.8%	4.3%	14.8%	9.7%	9.9%
% Still Enrolled	0.8%	4.4%	4.3%	1.9%	2.1%	1.8%	3.8%	1.9%	0.5%	2.2%

*Retention rate = (students who completed the program on-time) / (students scheduled to complete the program)

There has been fluctuation in the retention and attrition rates over the ten-year period documented in the above table. There were changes to the survey between 2003-2004 and 2004-2005, and between 2004-2005 and 2005-2007 that may have affected the comparability of these data over time.

[‡] Data were collected for the first time in the 2009-2010 survey. These completions are not included in the calculation of either the retention or attrition rates.

Student Census Data

The total number of students enrolled in nursing programs in the Northern Sacramento Valley region has more than doubled (n=284) in the past decade, but since 2007 has fluctuated. On October 15, 2010 there were 541 students enrolled in one of the region's pre-licensure nursing programs, a 7.4% decline (n=43) from the previous year. This is the result of fewer students enrolled in the region's BSN program.

Student Census Data*

Program Type	Year									
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
ADN Program	87	139	130	85	197	230	298	255	303	319
BSN Program	170	167	165	165	193	235	246	264	281	222
ELM Program	-	-	-	-	-	-	-	-	-	-
Total Nursing Students	257	306	295	250	390	465	544	519	584	541

*Census data represent the number of students on October 15th of the given year. Blank cells indicated that the applicable information was not requested in the given year.

**Changes in the survey may have accounted for the fluctuation in the number of pre-nursing students reported.

Clinical Simulation in Nursing Education

All three schools (100%) in the Northern Sacramento Valley region with pre-licensure nursing programs reported using clinical simulation² in 2009-2010. Schools reported that they use clinical simulation to standardize clinical experiences, to provide clinical experience not available in a clinical setting, and to check clinical competencies. Data also indicated that two of the three schools in the region have plans to expand their use of clinical simulation.

Reasons for Using a Clinical Simulation Center*	2007-2008	2008-2009	2009-2010
To standardize clinical experiences	100.0%	100.0%	100.0%
To provide clinical experience not available in a clinical setting	100.0%	100.0%	100.0%
To check clinical competencies	100.0%	100.0%	100.0%
To make up for clinical experiences	50.0%	33.3%	33.3%
To increase capacity in your nursing program	50.0%	33.3%	0.0%
Number of schools that use a clinical simulation center	2	3	3

*These data were collected for the first time in 2006-2007. However, changes in these questions for the 2007-2008 administration of the survey and lack of confidence in the reliability of the 2006-2007 data prevent comparability of the data. Therefore, data from previous years of the survey are not shown.

² Clinical Simulation Center/Experience - students have a simulated real-time nursing care experience using hi-fidelity mannequins and clinical scenarios, which allow them to integrate, apply, and refine specific skills and abilities that are based on theoretical concepts and scientific knowledge. The experience includes videotaping, de-briefing and dialogue as part of the learning process.

Clinical Space & Clinical Practice Restrictions[‡]

Only one of the region's three pre-licensure nursing programs (an ADN program) reported being denied access to two different clinical placement sites in 2009-2010 that had been available during the 2008-2009 academic year, affecting a total of 96 students. The reported reasons for why the program was denied clinical space were increased competition for clinical space, clinical staff nurses being overloaded, being displaced by another programs, and decrease in patient census.

Reasons for Clinical Space Being Unavailable	Total
	%
Competition for Clinical Space due to Increase in Number of Nursing Students in Region	100%
Staff Nurse Overload	100%
No Longer Accepting ADN Students	0.0%
Displaced by Another Program	100%
Clinical Facility Seeking Magnet Status	0.0%
Decrease in Patient Census	100%
Nursing Residency Programs	0.0%
Other	0.0%
Number of programs	1

All three nursing schools (100%) in the Northern California region reported that pre-licensure students in their programs had encountered restrictions to clinical practice imposed on them by clinical facilities. The most common types of restricted access students faced were to bar coding medication administration and access to electronic medical records. The most uncommon restriction faced by students was to an alternative clinical setting due to liability issues.

Type of Restricted Access	Percentage of Schools (%)					# Schools
	Very Uncommon	Uncommon	Common	Very Common	N/A	
Bar coding medication administration	0.0%	0.0%	33.3%	66.7%	0.0%	3
Electronic Medical Records	0.0%	0.0%	33.3%	66.7%	0.0%	3
Glucometers	0.0%	33.3%	33.3%	33.3%	0.0%	3
Automated medical supply cabinets	0.0%	0.0%	0.0%	33.3%	66.7%	3
IV medication administration	0.0%	66.7%	0.0%	33.3%	0.0%	3
Clinical site due to visit from accrediting agency (Joint Commission)	0.0%	33.3%	0.0%	66.7%	0.0%	3
Direct communication with health team	33.3%	33.3%	0.0%	33.3%	0.0%	3
Alternative setting due to liability	66.7%	33.3%	0.0%	0.0%	0.0%	3

[‡] Data were collected for the first time in the 2009-2010 survey.

Faculty Census Data

In 2009-2010 the total number of nursing faculty in the Northern Sacramento Valley region increased by 24.3% (n=20) over the previous year. On October 15, 2010, there were 102 total nursing faculty. Of these faculty, 35.3% (n=36) were full-time and 64.7% (n=66) were part-time. Despite an increase in the number of faculty over the last year, schools in the region reported needing additional faculty members. Nine faculty vacancies were reported, representing a 8.1% faculty vacancy rate, which is a historic high.

Faculty Census Data¹

	Year									
	2001	2002	2003	2004	2005 ^{*2}	2006*	2007*	2008	2009	2010
Total Faculty	39	41	45	47	37	63	84	80	82	102
Full-time	30	25	25	26	20	30	33	36	35	36
Part-time	9	16	20	21	17	33	51	44	47	66
Vacancy Rate**		2.4%	0.0%	0.0%	0.0%	4.5%	6.7%	0.0%	3.5%	8.1%
Vacancies		1	0	0	0	3	6	0	3	9

* The sum of full- and part-time faculty did not equal the total faculty reported in these years.

**Vacancy rate = number of vacancies/(total faculty + number of vacancies)

1 - Census data represent the number of faculty on October 15th of the given year.

2 - Faculty vacancies were estimated based on the vacant FTEs reported.

Summary

Pre-licensure nursing programs in the Northern Sacramento Valley region reported a substantial increase in the number of available admission spaces over a two-year period beginning 2003-2004. Since then available space has leveled off, with some fluctuation. New student enrollments in these programs have followed much the same pattern, with the exception of the region's BSN program which reported a dramatic decline in new enrollments in 2009-2010.

Although the number of qualified applications in 2009-2010 declined very slightly from the previous year, the region's programs continue to receive many more than can be accommodated by available space. In 2009-2010, 78.4% of qualified applications received were not accepted for admission. This is the greatest share of unaccepted applications in the past decade.

The trend in student completions resembles that of available space and new student enrollments, with a small lag time. After big increases beginning with the 2006-2007 academic year, completions have been fairly steady in number over the past four years, fluctuating in a narrow range from 200 to 225 completions per year. The comparatively high retention rate has been one of the most consistent features of pre-license nursing education programs in the Northern Sacramento region. In 2009-2010, the rate was 87.9%, down very slightly from the previous year.

All three programs in the region reported use of clinical simulation during the 2009-2010 academic year, and two of the three programs reported plans to expand its use. Only one school reported being denied access to clinical space that had been previously available. All three schools reported that students had faced restricted access to specific types of clinical practice or to a clinical site itself during the year.

Expansion in RN education has required nursing programs to hire more faculty members to teach the growing number of students. Nursing schools in the region reported a need for additional faculty in three of the last four years. In 2010, nine vacancies were reported, representing a 8.1% vacancy rate, which is the highest in a decade. These data suggest that nursing schools in the region may not be able to maintain or expand enrollments without more faculty.

APPENDIX A – Northern Sacramento Valley Nursing Education Programs

ADN Programs

Butte College
Shasta Community College

BSN Programs

CSU Chico

APPENDIX B – BRN Education Advisory Committee Members

BRN Education Advisory Committee Members

Members

Loucine Huckabay, Chair
Sue Albert
Audrey Berman
Liz Close
Patricia Girczyc
Marilyn Herrmann
Deloras Jones
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